

Work Order ID 150860

Thursday, September 08, 2016 11:10:14 AM

150860

Page 1

Item ID: D3965-4 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Bearing, Spherical
Start Date: 9/19/2016 Start Qty: 12.00 ***12*** Cust Item ID:
Required Date: 9/23/2016 Req'd Qty: 12.00 ***12*** Customer:
Reference:

Approvals: Process Plan: **DAS 21** Date: **SEP 08 2016** Tooling: Date: Run Start ***NR1***
QC: **9-89** Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3965	B

100

0.00

100

Purchasing

Purchasing

Memo

PURCHASING

Issue P/O: **33587**

Purchase Part Number: 63215K52

Possible Supplier: McMaster

Material release note is required

12**SEP 08 2016****DAS 13 9-89**

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Packaging

Memo

0.04

Dx sp/6-9-12

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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							Lead hand / Supervisor Approval Verification																		
							QC / QA Coordinator Approval																		
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																	
OTHER : _____																									

Work Order ID 150860

Thursday, September 08, 2016 11:10:14 AM

150860

Page 2

Item ID: D3965-4

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Bearing, Spherical

Start Date: 9/19/2016 Start Qty: 12.00

12

Cust Item ID:

Required Date: 9/23/2016 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

12DAS
38
9-89

SEP 13 2016

130

Identify as per dwg & Stock Location:

0.00

130

Packaging

Memo

0.02

Packaging

12 DAS
6
9-89

SEP 13 2016

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.20

Quality Control

DAS
21
9-89

SEP 14 2016

DAS
21
9-89

SEP 14 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
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Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Picklist Print

Thursday, September 08, 2016 11:10:18 AM

Page 1

Work Order ID: 150860

150860

Parent Item: D3965-4

D3965-4

Parent Item Name: Bearing, Spherical

Start Date: 9/19/2016

Required Date: 9/23/2016

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP RevA: New issue DD verified by:EC
12.03.06 AS PER DWG REV.B DD VERF:EC

IPP REV:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
63215K52		Purchased	No			110	Each	0.0000	1	12			
63215K52									**				
Bearing Spherical													

12x spd 6-7-12

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

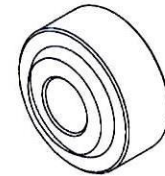
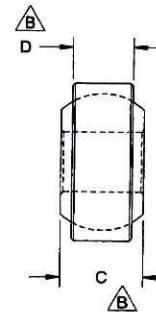
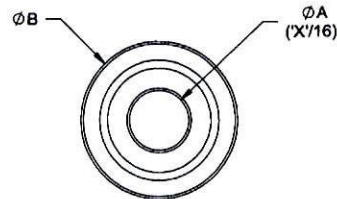
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OTHER : _____																																																															

SPECIFICATION CONTROL DRAWING

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 150860 MJS
16-09-08



D3965-X BEARING, SPHERICAL

WHERE 'X' IS I.D. IN 1/16" OF AN INCH
EG $\phi 1/4"$ (4/16") I.D. BEARING = D3965-4

DART P/N	SUPPLIER	SUPPLIER P/N	A	B	C	D	STATIC RADIAL LOAD CAP. lbs
D3965-3	McMASTER-CARR	63215K31	0.188	0.563	0.281	.219	3,975
D3965-4	McMASTER-CARR	63215K52	0.250	0.656	0.344	0.250	6,040
D3965-5	McMASTER-CARR	63215K53	0.313	0.750	0.375	0.281	8,750
D3965-6	McMASTER-CARR	63215K34	0.375	0.813	0.406	0.313	10,540

RELEASED
2012-03-02

NOTES:

- 1) MATERIAL: 440C STAINLESS STEEL WITH PTFE LINER
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A

B	CORRECT LETTER DESIGNATED C & D (ZN C4-1) PER PAR11-151	RF	12.01.10
A	NEW ISSUE	RF	09.07.09
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF	DRAWING NO.	REV. B
CHECKED	<i>10</i>	D3965	SHEET 1 OF 1
MFG. APPR.	<i>E</i>	TITLE	SCALE
APPROVED	<i>10</i>	BEARING, SPHERICAL	NTS
DE APPR.	<i>10</i>	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	12.01.10		

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
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Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	
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Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____				
Misidentified ☐	☐	Past Due ☐					



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO33587**

Purchase Order Date 9/8/2016

PO Print Date 9/8/2016

Page Number 2 of 3

Order From :

MCMaster-CARR SUPPLY CO,
P.O. BOX 7690
CHICAGO, IL 60680-7690
US

VU-MCM001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

330 995 5500

Ship To Contact

Ship To Phone

Ship Via:

Purolator ground ppd

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 10

Currency

USD

FOB

FCA - (Free Carrier)

Line Total: \$36.78

4 63215K52

Bearing Spherical

9/13/2016

Yes

9/13/2016

12.00

Each

\$15.62

\$187.44

AS PER DWG D3965 REV. B
B150860

8/16-9-12

Line Total: \$187.44

5 59915K274

Rod End Bearing

9/13/2016

Yes

9/13/2016

6.00

Each

\$19.05

\$114.30

AS PER DWG D4777 REV. A
B150859

Line Total: \$114.30

6 86715K27

Adhesive Rubber Seal 60A
durometer

9/13/2016

Yes

9/13/2016

6.00

Each

\$16.73

\$100.38

AS PER DWG 601.3083
B150862

Note:

9/8/2016



McMASTER-CARR®

Packing List

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada
Attention: Eric.D

Purchase Order
PO33587

Order Placed By
Chantal Lavoie

McMaster-Carr Number
8285477-02

Page 1 of 1

09/08/2016

Line	Product	Ordered	Shipped
1	6641A41 Loctite Gasket Maker, #598, 2.36 oz Tube	8 Each	8
3	97395A451 Corrosion Resistant Dowel Pin, Type 316 Stainless Steel, 1/8" Diameter, 3/4" Length, Packs of 10	3 Packs	3
4	63215K52 Stainless Steel Ball Joint Swivel Bearing, PTFE Lined, 1/4" ID, 21/32" OD, 11/32" Ball Thick	12 Each	12
5	59915K274 PTFE-Lined Stainless Steel Ball Joint Rod End, 3/8"-24 Right-Hand Male Shank, 3/8" Ball ID, 1-1/4" L Thread	6 Each	6
6	2340A11 Mitutoyo Harsh Environment Electronic Caliper, Number 500-752-20, 0-6" (0-150MM) Range	2 Each	2

Shipped separately from our Atlanta warehouse on 09/08

2	9928K53 Impact-Resistant UHMW Polyethylene U-Channel, 1" Base X 3/4" Legs, 1/4" Thick, 8' Long	32 Feet	32
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Notes about your shipment

The U.S. Department of Transportation regulates the shipping of line 6. By purchasing from McMaster-Carr Supply Company, you agree not to transport or permit others to transport purchased items except in accordance with U.S. law and any other applicable laws.